

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Nashville 2960 Foster Creighton Drive Nashville, TN 37204 Tel: (615)726-0177

TestAmerica Job ID: 490-19902-1

Client Project/Site: NPDES Permit MA0000833

#### For:

Exxon Global Remed. Grp 52 Beacham Street Everett, Massachusetts 02149

Attn: Mr. Ernest E Haynes



Authorized for release by: 2/22/2013 3:19:27 PM Cathy Gartner Project Manager I cathy.gartner@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833 TestAmerica Job ID: 490-19902-1

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## **Sample Summary**

Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833 TestAmerica Job ID: 490-19902-1

l ah Cammia ID	Client Comple ID	Madeire	Callagted	Dessived
Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-19902-1	Outfall 01C	Wastewater	02/19/13 09:51	02/20/13 08:20
490-19902-2	Outfall 01C-TSS-1	Wastewater	02/19/13 09:51	02/20/13 08:20
490-19902-5	Trip Blank	Water	02/19/13 09:51	02/20/13 08:20

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#### **Case Narrative**

Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833 TestAmerica Job ID: 490-19902-1

Job ID: 490-19902-1

**Laboratory: TestAmerica Nashville** 

Narrative

Job Narrative 490-19902-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 2/20/2013 8:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.3° C.

#### **HPLC**

Method(s) 610: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 59907.

No other analytical or quality issues were noted.

#### GC VOA

No analytical or quality issues were noted.

#### **General Chemistry**

Method(s) SM 2540D: Batch 59933 is reported with one sample duplicate. The second is unavailable for reporting. The associated laboratory control sample (LCS) met acceptance criteria and provides long-term precision and accuracy for this batch.

No other analytical or quality issues were noted.

#### **Organic Prep**

Method(s) 1664A: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 60070 exceeded control limits for the following analytes: HEM

No other analytical or quality issues were noted.

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## **Definitions/Glossary**

Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833 TestAmerica Job ID: 490-19902-1

#### **Qualifiers**

#### **General Chemistry**

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits

#### **Glossary**

RPD

TEF

TEQ

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

## **Client Sample Results**

Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833 TestAmerica Job ID: 490-19902-1

Lab Sample ID: 490-19902-1

Matrix: Wastewater

Client Sample ID: Outfall 01C Date Collected: 02/19/13 09:51

Date Received: 02/20/13 08:20

Oil & Grease (HEM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.360		1.00	0.360	ug/L			02/21/13 14:24	1
Toluene	<0.330		1.00	0.330	ug/L			02/21/13 14:24	1
Ethylbenzene	<0.370		1.00	0.370	ug/L			02/21/13 14:24	1
Xylenes, Total	<0.600		3.00	0.600	ug/L			02/21/13 14:24	1
Methyl tert-butyl ether	4.14		1.00	0.460	ug/L			02/21/13 14:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	84	-	50 - 150			-		02/21/13 14:24	

Method: 610 - PAHs (HPLC) Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.170		1.00	0.170	ug/L		02/20/13 13:17	02/21/13 15:54	1
Acenaphthylene	<0.230		1.00	0.230	ug/L		02/20/13 13:17	02/21/13 15:54	1
Anthracene	<0.100		1.00	0.100	ug/L		02/20/13 13:17	02/21/13 15:54	1
Benzo[a]anthracene	<0.0200		0.200	0.0200	ug/L		02/20/13 13:17	02/21/13 15:54	1
Benzo[a]pyrene	<0.0200		0.100	0.0200	ug/L		02/20/13 13:17	02/21/13 15:54	1
Benzo[b]fluoranthene	<0.0200		0.100	0.0200	ug/L		02/20/13 13:17	02/21/13 15:54	1
Benzo[g,h,i]perylene	<0.0200		0.200	0.0200	ug/L		02/20/13 13:17	02/21/13 15:54	1
Benzo[k]fluoranthene	<0.0200		0.140	0.0200	ug/L		02/20/13 13:17	02/21/13 15:54	1
Chrysene	<0.0200		0.100	0.0200	ug/L		02/20/13 13:17	02/21/13 15:54	1
Dibenz(a,h)anthracene	<0.0300		0.200	0.0300	ug/L		02/20/13 13:17	02/21/13 15:54	1
Fluoranthene	<0.0300		0.200	0.0300	ug/L		02/20/13 13:17	02/21/13 15:54	1
Fluorene	<0.0400		0.500	0.0400	ug/L		02/20/13 13:17	02/21/13 15:54	1
Indeno[1,2,3-cd]pyrene	<0.0400		0.200	0.0400	ug/L		02/20/13 13:17	02/21/13 15:54	1
Naphthalene	<0.340		1.00	0.340	ug/L		02/20/13 13:17	02/21/13 15:54	1
Phenanthrene	<0.0500		0.500	0.0500	ug/L		02/20/13 13:17	02/21/13 15:54	1
Pyrene	<0.0300		0.200	0.0300	ug/L		02/20/13 13:17	02/21/13 15:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	62		25 - 135				02/20/13 13:17	02/21/13 15:54	1
- General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

3.62

1.27 mg/L

<1.27

02/21/13 09:04

02/21/13 09:04

2

1

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## **Client Sample Results**

Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833 TestAmerica Job ID: 490-19902-1

Client Sample ID: Outfall 01C-TSS-1

Lab Sample ID: 490-19902-2

Date Collected: 02/19/13 09:51 Date Received: 02/20/13 08:20 Matrix: Wastewater

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1.16		1.05	0.632	mg/L			02/21/13 13:59	1

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## **Client Sample Results**

Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833 TestAmerica Job ID: 490-19902-1

Lab Sample ID: 490-19902-5

02/21/13 13:52

Matrix: Water

Client Sample ID: Trip Blank Date Collected: 02/19/13 09:51

Date Received: 02/20/13 08:20

a,a,a-Trifluorotoluene

Method: 602 - Purgeable Aromatics (GC) Dil Fac Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Benzene <0.360 1.00 0.360 ug/L 02/21/13 13:52 Toluene < 0.330 1.00 0.330 ug/L 02/21/13 13:52 Ethylbenzene < 0.370 1.00 0.370 ug/L 02/21/13 13:52 Xylenes, Total <0.600 3.00 0.600 ug/L 02/21/13 13:52 Methyl tert-butyl ether < 0.460 1.00 0.460 ug/L 02/21/13 13:52 Dil Fac Surrogate %Recovery Qualifier Limits Prepared Analyzed

50 - 150

89

5

6

0

16

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Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833

Method: 602 - Purgeable Aromatics (GC)

Lab Sample ID: MB 490-60073/11

**Matrix: Water** 

**Analysis Batch: 60073** 

Client Sample ID: Method Blank

Prep Type: Total/NA

мв мв Result Qualifier RLMDL Unit D Prepared Analyzed Dil Fac Analyte Benzene < 0.360 1.00 0.360 ug/L 02/21/13 13:19 Toluene < 0.330 1.00 0.330 ug/L 02/21/13 13:19 < 0.370 Ethylbenzene 1.00 0.370 ug/L 02/21/13 13:19 Xylenes, Total < 0.600 3.00 0.600 ug/L 02/21/13 13:19 Methyl tert-butyl ether < 0.460 1.00 0.460 ug/L 02/21/13 13:19

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac a,a,a-Trifluorotoluene 82 50 - 150 02/21/13 13:19

> Client Sample ID: Lab Control Sample Prep Type: Total/NA

Lab Sample ID: LCS 490-60073/5 **Matrix: Water** 

**Analysis Batch: 60073** 

LCS LCS Spike %Rec. Result Qualifier %Rec Analyte Added Unit Limits 39 - 150 Benzene 20.0 19.55 ug/L 98 Toluene 20.0 19.52 ug/L 98 46 - 148 20.0 19.67 98 Ethylbenzene ug/L 32 - 160 Xylenes, Total 60.0 59.90 ug/L 100 66 - 136 20.0 19.09 Methyl tert-butyl ether ug/L 95 56 - 136

LCS LCS

Surrogate %Recovery Qualifier Limits a,a,a-Trifluorotoluene 90 50 - 150

Lab Sample ID: 460-51016-B-1 MS

**Matrix: Water** 

**Analysis Batch: 60073** 

Client Sample ID: Matrix Spike

Prep Type: Total/NA

MS MS %Rec. Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Benzene <0.360 20.0 19.54 ug/L 98 39 - 150 Toluene < 0.330 20.0 19.46 97 ug/L 46 - 148 Ethylbenzene < 0.370 20.0 19.88 99 32 - 160 ug/L Xylenes, Total < 0.600 60.0 60.06 ug/L 100 66 - 136 Methyl tert-butyl ether 20.0 21.25 1.59 ug/L 56 - 136

MS MS

MB MB

Surrogate %Recovery Qualifier Limits 87 50 - 150 a,a,a-Trifluorotoluene

Method: 610 - PAHs (HPLC)

Lab Sample ID: MB 490-59907/1-A

**Matrix: Water** 

**Analysis Batch: 60203** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 59907

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.170		1.00	0.170	ug/L		02/20/13 13:17	02/21/13 14:38	1
Acenaphthylene	<0.230		1.00	0.230	ug/L		02/20/13 13:17	02/21/13 14:38	1
Anthracene	<0.100		1.00	0.100	ug/L		02/20/13 13:17	02/21/13 14:38	1

TestAmerica Nashville

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Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833

Method: 610 - PAHs (HPLC) (Continued)

Lab Sample ID: MB 490-59907/1-A

Lab Sample ID: LCS 490-59907/2-A

**Matrix: Water** 

**Matrix: Water** 

**Analysis Batch: 60203** 

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 59907

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	<0.0200		0.200	0.0200	ug/L		02/20/13 13:17	02/21/13 14:38	1
Benzo[a]pyrene	<0.0200		0.100	0.0200	ug/L		02/20/13 13:17	02/21/13 14:38	1
Benzo[b]fluoranthene	<0.0200		0.100	0.0200	ug/L		02/20/13 13:17	02/21/13 14:38	1
Benzo[g,h,i]perylene	<0.0200		0.200	0.0200	ug/L		02/20/13 13:17	02/21/13 14:38	1
Benzo[k]fluoranthene	<0.0200		0.140	0.0200	ug/L		02/20/13 13:17	02/21/13 14:38	1
Chrysene	<0.0200		0.100	0.0200	ug/L		02/20/13 13:17	02/21/13 14:38	1
Dibenz(a,h)anthracene	<0.0300		0.200	0.0300	ug/L		02/20/13 13:17	02/21/13 14:38	1
Fluoranthene	<0.0300		0.200	0.0300	ug/L		02/20/13 13:17	02/21/13 14:38	1
Fluorene	<0.0400		0.500	0.0400	ug/L		02/20/13 13:17	02/21/13 14:38	1
Indeno[1,2,3-cd]pyrene	<0.0400		0.200	0.0400	ug/L		02/20/13 13:17	02/21/13 14:38	1
Naphthalene	<0.340		1.00	0.340	ug/L		02/20/13 13:17	02/21/13 14:38	1
Phenanthrene	<0.0500		0.500	0.0500	ug/L		02/20/13 13:17	02/21/13 14:38	1
Pyrene	<0.0300		0.200	0.0300	ug/L		02/20/13 13:17	02/21/13 14:38	1
,					U				

MB MB

MR MR

%Recovery Qualifier Limits Dil Fac Surrogate Prepared Analyzed 25 - 135 02/20/13 13:17 02/21/13 14:38 p-Terphenyl 71

**Client Sample ID: Lab Control Sample** 

Prep Batch: 59907

Analysis Batch: 60203 LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Acenaphthene 2.50 1.787 71 1 - 124 ug/L 5.00 Acenaphthylene 3.265 65 1 \_ 139 ug/L Anthracene 2.50 1.949 ug/L 78 1 - 126 Benzo[a]anthracene 2.50 1.890 ug/L 76 12 - 135 Benzo[a]pyrene 2.50 1.893 ug/L 76 1 - 128 Benzo[b]fluoranthene 2.50 1.857 74 6 - 150 ug/L 2.50 65 Benzo[g,h,i]perylene 1.622 ug/L 1 - 116 Benzo[k]fluoranthene 2.50 1.853 ug/L 74 1 - 159 Chrysene 2.50 1.915 ug/L 77 1 - 199 Dibenz(a,h)anthracene 2.50 1.353 54 1 - 110 ug/L Fluoranthene 2.50 1.903 ug/L 76 14 - 123 Fluorene 2.50 1.742 ug/L 70 1 - 142 71 Indeno[1,2,3-cd]pyrene 2.50 1.787 ug/L 1 - 116 Naphthalene 2.50 1.620 ug/L 65 1 - 122 Phenanthrene 2.50 1.853 74 ug/L 1 - 155

2.50

LCS LCS

Surrogate %Recovery Qualifier Limits 25 - 135 p-Terphenyl 77

Lab Sample ID: LCSD 490-59907/3-A

**Matrix: Water** 

Pyrene

Analysis Batch: 60203						Pre	p Batch:	59907
	Spike	LCSD	LCSD			%Rec.		RPD
Analyte	Added	Result	Qualifier U	Jnit D	%Rec	Limits	RPD	Limit
Acenaphthene	2.50	2.192	u	ıg/L	88	1 - 124	20	50

1.982

ug/L

79

1 - 140

Client Sample ID: Lab Control Sample Dup

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Prep Type: Total/NA

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Prep Type: Total/NA

Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833

Method: 610 - PAHs (HPLC) (Continued)

I	Lab Sample ID: LCSD 490-59907/3-A		Client Sample ID: Lab Control Sample Dup
	Matrix: Water		Prep Type: Total/NA
l	Analysis Batch: 60203		Prep Batch: 59907

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acenaphthylene	5.00	3.906		ug/L		78	1 - 139	16	50
Anthracene	2.50	2.225		ug/L		89	1 - 126	13	50
Benzo[a]anthracene	2.50	2.142		ug/L		86	12 - 135	12	50
Benzo[a]pyrene	2.50	2.171		ug/L		87	1 - 128	14	50
Benzo[b]fluoranthene	2.50	2.169		ug/L		87	6 - 150	15	50
Benzo[g,h,i]perylene	2.50	1.974		ug/L		79	1 - 116	22	50
Benzo[k]fluoranthene	2.50	2.097		ug/L		84	1 - 159	13	50
Chrysene	2.50	2.181		ug/L		87	1 - 199	13	50
Dibenz(a,h)anthracene	2.50	1.645		ug/L		66	1 - 110	21	50
Fluoranthene	2.50	2.141		ug/L		86	14 - 123	12	50
Fluorene	2.50	2.044		ug/L		82	1 - 142	16	50
Indeno[1,2,3-cd]pyrene	2.50	2.036		ug/L		81	1 - 116	14	50
Naphthalene	2.50	1.929		ug/L		77	1 - 122	17	50
Phenanthrene	2.50	2.123		ug/L		85	1 - 155	14	50
Pyrene	2.50	2.242		ug/L		90	1 _ 140	12	50

LCSD LCSD Surrogate %Recovery Qualifier Limits 25 - 135 p-Terphenyl 88

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: LCSD 490-60066/3-A

Lab Sample ID: MB 490-60066/1-A Client Sample ID: Method Blank **Matrix: Water** Prep Type: Total/NA **Analysis Batch: 60070** Prep Batch: 60066

мв мв Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac

Oil & Grease (HEM) <1.40 4.00 1.40 mg/L 02/21/13 09:04 02/21/13 09:04

Lab Sample ID: LCS 490-60066/2-A Client Sample ID: Lab Control Sample **Matrix: Water** Prep Type: Total/NA **Analysis Batch: 60070** Prep Batch: 60066

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Oil & Grease (HEM)	41.7	39.69		mg/L	<del></del>	95	78 - 114	 

Matrix: Water							Prep T	ype: Tot	tal/NA
Analysis Batch: 60070							Prep	Batch:	60066
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Oil & Grease (HEM)	41.7	32.81	*	mg/L		79	78 - 114	19	18

Lab Sample ID: 490-19561-Q Matrix: Water	-1-A MS							Client	•	Matrix Spike
Analysis Batch: 60070			<b>.</b>						•	Batch: 60066
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Oil & Grease (HEM)	<1.60	*	47.1	41.76		mg/L		89	78 - 114	

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**Client Sample ID: Lab Control Sample Dup** 

#### **QC Sample Results**

Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833 TestAmerica Job ID: 490-19902-1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 490-59933/1 Client Sample ID: Method Blank **Matrix: Water** 

Prep Type: Total/NA

Analysis Batch: 59933

MB MB

Result Qualifier RL MDL Unit Dil Fac Analyte D Prepared Analyzed Total Suspended Solids <0.600 1.00 0.600 mg/L 02/21/13 13:59

Lab Sample ID: LCS 490-59933/2 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 59933

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit %Rec Limits Total Suspended Solids 101 102.5 mg/L 102 90 - 110

Lab Sample ID: 490-19904-K-1 DU Client Sample ID: Duplicate **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 59933

DU DU RPD Sample Sample Result Qualifier Limit Result Qualifier Unit **RPD** 

Total Suspended Solids 1.50 <0.600 NC 20 mg/L

## **QC Association Summary**

Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833 TestAmerica Job ID: 490-19902-1

#### **GC VOA**

#### **Analysis Batch: 60073**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-51016-B-1 MS	Matrix Spike	Total/NA	Water	602	
490-19902-1	Outfall 01C	Total/NA	Wastewater	602	
490-19902-5	Trip Blank	Total/NA	Water	602	
LCS 490-60073/5	Lab Control Sample	Total/NA	Water	602	
MB 490-60073/11	Method Blank	Total/NA	Water	602	

#### HPLC/IC

#### Prep Batch: 59907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-19902-1	Outfall 01C	Total/NA	Wastewater	610	
LCS 490-59907/2-A	Lab Control Sample	Total/NA	Water	610	
LCSD 490-59907/3-A	Lab Control Sample Dup	Total/NA	Water	610	
MB 490-59907/1-A	Method Blank	Total/NA	Water	610	

#### Analysis Batch: 60203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-19902-1	Outfall 01C	Total/NA	Wastewater	610	59907
LCS 490-59907/2-A	Lab Control Sample	Total/NA	Water	610	59907
LCSD 490-59907/3-A	Lab Control Sample Dup	Total/NA	Water	610	59907
MB 490-59907/1-A	Method Blank	Total/NA	Water	610	59907

## **General Chemistry**

#### Analysis Batch: 59933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method F	rep Batch
490-19902-2	Outfall 01C-TSS-1	Total/NA	Wastewater	SM 2540D	
490-19904-K-1 DU	Duplicate	Total/NA	Water	SM 2540D	
LCS 490-59933/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 490-59933/1	Method Blank	Total/NA	Water	SM 2540D	

#### Prep Batch: 60066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-19561-Q-1-A MS	Matrix Spike	Total/NA	Water	1664A	
490-19902-1	Outfall 01C	Total/NA	Wastewater	1664A	
LCS 490-60066/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 490-60066/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 490-60066/1-A	Method Blank	Total/NA	Water	1664A	

#### **Analysis Batch: 60070**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-19561-Q-1-A MS	Matrix Spike	Total/NA	Water	1664A	60066
490-19902-1	Outfall 01C	Total/NA	Wastewater	1664A	60066
LCS 490-60066/2-A	Lab Control Sample	Total/NA	Water	1664A	60066
LCSD 490-60066/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	60066
MB 490-60066/1-A	Method Blank	Total/NA	Water	1664A	60066

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#### **Lab Chronicle**

Client: Exxon Global Remed. Grp

Project/Site: NPDES Permit MA0000833

TestAmerica Job ID: 490-19902-1

Lab Sample ID: 490-19902-1

Matrix: Wastewater

Client Sample ID: Outfall 01C

Date Collected: 02/19/13 09:51 Date Received: 02/20/13 08:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	602		1	60073	02/21/13 14:24	GM	TAL NSH
Total/NA	Prep	610			59907	02/20/13 13:17	AL	TAL NSH
Total/NA	Analysis	610		1	60203	02/21/13 15:54	HT	TAL NSH
Total/NA	Analysis	1664A		1	60070	02/21/13 09:04	BD	TAL NSH
Total/NA	Prep	1664A			60066	02/21/13 09:04	BD	TAL NSH

Client Sample ID: Outfall 01C-TSS-1

Date Collected: 02/19/13 09:51

Date Received: 02/20/13 08:20

Lab Sample ID: 490-19902-2

**Matrix: Wastewater** 

Batch Batch Dilution Batch Prepared Method Run or Analyzed Type Factor Number Prep Type Analyst Lab Total/NA SM 2540D 59933 02/21/13 13:59 TAL NSH Analysis NH

Client Sample ID: Trip Blank

Date Collected: 02/19/13 09:51

Date Received: 02/20/13 08:20

Lab	Sample	ID:	490-1	19902-5

Matrix: Water

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	602		1	60073	02/21/13 13:52	GM	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TestAmerica Nashville

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## **Method Summary**

Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833 TestAmerica Job ID: 490-19902-1

Method	Method Description	Protocol	Laboratory
602	Purgeable Aromatics (GC)	40CFR136A	TAL NSH
610	PAHs (HPLC)	40CFR136A	TAL NSH
1664A	HEM and SGT-HEM	1664A	TAL NSH
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL NSH

#### Protocol References:

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

#### Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

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Client: Exxon Global Remed. Grp Project/Site: NPDES Permit MA0000833

#### Laboratory: TestAmerica Nashville

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	ACIL		393	10-30-13
A2LA	ISO/IEC 17025		0453.07	12-31-13
Alabama	State Program	4	41150	05-31-13
Alaska (UST)	State Program	10	UST-087	07-24-13
Arizona	State Program	9	AZ0473	05-05-13
Arkansas DEQ	State Program	6	88-0737	04-25-13
California	NELAP	9	1168CA	10-31-13
Canadian Assoc Lab Accred (CALA)	Canada		3744	03-08-14
Colorado	State Program	8	N/A	02-28-13
Connecticut	State Program	1	PH-0220	12-31-13
Florida	NELAP	4	E87358	06-30-13
Illinois	NELAP	5	200010	12-09-13
lowa	State Program	7	131	05-01-14
Kansas	NELAP	7	E-10229	10-31-13
Kentucky (UST)	State Program	4	19	09-15-13
Louisiana	NELAP	6	30613	06-30-13
Maryland	State Program	3	316	03-31-13
Massachusetts	State Program	1	M-TN032	06-30-13
Minnesota	NELAP	5	047-999-345	12-31-13
Mississippi	State Program	4	N/A	06-30-13
Montana (UST)	State Program	8	NA	01-01-15
Nevada	State Program	9	TN00032	07-31-13
New Hampshire	NELAP	1	2963	10-09-13
New Jersey	NELAP	2	TN965	06-30-13
New York	NELAP	2	11342	04-01-13
North Carolina DENR	State Program	4	387	12-31-13
North Dakota	State Program	8	R-146	06-30-13
Ohio VAP	State Program	5	CL0033	01-19-14
Oklahoma	State Program	6	9412	08-31-13
Oregon	NELAP	10	TN200001	04-30-13
Pennsylvania	NELAP	3	68-00585	06-30-13
Rhode Island	State Program	1	LAO00268	12-30-13
South Carolina	State Program	4	84009 (001)	02-28-13
South Carolina	State Program		84009 (002)	02-23-14
Tennessee	State Program	4	2008	02-23-14
Texas	NELAP	6	T104704077-09-TX	08-31-13
USDA	Federal	<del>-</del>	S-48469	11-02-13
Utah	NELAP	8	TAN	06-30-13
Virginia	NELAP	3	460152	06-14-13
Washington	State Program	10	C789	07-19-13
West Virginia DEP	State Program	3	219	02-28-13
Wisconsin	State Program	5 5	998020430	08-31-13
Wyoming (UST)	A2LA		453.07	12-31-13

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## **COOLER RECEIPT FORM**

Cooler Received/Opened On 2/20/2013 @ 0820	
1. Tracking #// 3 \(last 4 digits, FedEx)	
Courier: FedEx IR Gun ID 17610176	
2. Temperature of rep. sample or temp blank when opened: 2.3Degrees Celsius	
3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen?	YES NO. (NA
4. Were custody seals on outside of cooler?	YES)NONA
If yes, how many and where:	
5. Were the seals intact, signed, and dated correctly?	YES NONA
3. Were custody papers inside cooler?	YESNONA
certify that I opened the cooler and answered questions 1-6 (intial)	
7. Were custody seals on containers: YES 🍯 and Intact	YESNO
Were these signed and dated correctly?	YESNONA
3. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Pape	er Other None
9. Cooling process: (Ce   Ice-pack   Ice (direct contact)   Dry ice	e Other None
10. Did all containers arrive in good condition (unbroken)?	(ES)NONA
11. Were all container labels complete (#, date, signed, pres., etc)?	ESNONA
12. Did all container labels and tags agree with custody papers?	(YES)NONA
13a. Were VOA vials received?	ESNONA
b. Was there any observable headspace present in any VOA vial?	YES. (NO).NA
14. Was there a Trip Blank in this cooler? (YES)NONA If multiple coolers, sequen	nce #
certify that I unloaded the cooler and answered questions 7-14 (intial)	<u> </u>
I5a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level?	YESNO.
b. Did the bottle labels indicate that the correct preservatives were used	ESNONA
16. Was residual chlorine present?	YES(10)NA
certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)	
17. Were custody papers properly filled out (ink, signed, etc)?	ESNONA
18. Did you sign the custody papers in the appropriate place?	YES NONA
19. Were correct containers used for the analysis requested?	(PES)NONA
20. Was sufficient amount of sample sent in each container?	YES)NONA
certify that I entered this project into LIMS and answered questions 17-20 (intial)	W
certify that I attached a label with the unique LIMS number to each container (intial)	
21. Were there Non-Conformance issues at login? YES. (NO) Was a NCM generated? YES.	.NO.)#

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Boood To: sperny@trij.imvirate com: emest e havnes@eyyonm	(ExxonNobil PM uni	X
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a havnesmer	licated)	0
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THE LEADER IN ENVIRONMENTAL TESTING Nashville, TN 37204

Consultant Name: ExxonMobil Everett Terminal
Address: 52 Beacham Street City/State/Zip: Everett, MA 02149

ExxonMobil Project Mgr. Ernest Hayes

Consultant Project Mgr. Triumvirate - Sandra Perry (Call Visoth at (617) 799 - 4357 for sample related questions)

PROJECT #: NPDES Permit MA0000833
Facility ID #

Report To: sperry@triumvirate.com; emest.e.haynes@exxonmobil.com

lest America

2960 Foster Creighton Nashville Division

Toll Free: 800-765-0980 Phone: 615-726-0177

Fax: 615-726-3404

Consultant Telephone Number: 617-381-2802	617-381-2802				יג	Fax No.: 617-381-2954				Site Address SAME	S SAME											
Sampler Name: (Print)	Visoth Sin	<u>`</u>								City, State, Zip	ק											
Sampler Signature:		14							Regul	Regulatory District (CA)												. 1
	9						-						A 100 F 20									
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						Perservative	$\perp$	4	Matrix		Monthly	thly	ر د	Quarterly		]			1	1		
		ntainers Shipped	L south second	<b>6</b>	red	abel) ange Label) stic (Yellow Label) ss(Yellow Label) Label)		r	ater	2540D	50	ene, & total Xylene,						Pre-Schedule) *	est (In Bus. Days)	lts (yes or no)	of Report	of 20
Sample ID or Field ID	Date San	No. of Co	Grab	Composit	Fleid Filte	H <sub>2</sub> SO <sub>4</sub> Glas HNO <sub>3</sub> (Red	None (Blac Groundwate	Wastewate	Drinking W Sludge Soli	Other (spec TSS * SM : O & G by EPA 16	PAH's 610	Benzene, ' Ethylbenze MTBE by E	 V 181					RUSH TAT (I	TAT reque	Fax Resul	Due Date	ge 18
Outfall 01 C	2/19/13/0951	2	×			×		×		×							1 L Glass	×	2	<del> </del>		Pa
Outfall 01 C		ω	×			×		×				×				40 ml	40 ml Glass (VOA)	×	2			
Outfall 01 C		2	×				×	×			×						1 L Glass	×	2	ļ		*
Outfall 01 C-TSS - 1			×				×	×		×							1 L Plastic	×	2			1
Outfall 01 C-TSS - 2			×				×	×	HOLD to	HOLD for analysis							1 L Plastic	-	-			w
Outfall 01 C-T\$S <sub>7</sub> 3 /		1	×				×	×	HOLD to	HOLD for analysis							1 L Plastic		-		<u> </u>	-
Trip blank.	<b>←</b>	W										×						<del></del>				N
Comments/Special Instructions: Laboratory case narative to NELAC-Institute	PLEASE SEE ATTACHED ML REQUIREMENTS	HED ML I	REQUIR	ÆME	TS						Labora	Laboratory Comments: Temperature Upon Receipt: 2.3c	S: Upon Receip	i ii	1,							
standard protocol,	han dan dan debendadik kontaksan kannada anka 1 kw odd	Statement of the statem				The Manager (All III) and the Address of the American	1			1		Sample Containers Intact? VOCs Free of Headspace?	ainers Intact? Headspace?	,				<b>~</b> ~		zz		
Relinquished by:	2//2/12	Time		Received by	by:	2			Date	Time	QC Del	QC Deliverables (please circle one) Level 2	<u>e circle one)</u> Level 3	ω		Level 4	4		Q	Other		
,,()	01.10	100		3	٢	UX Tago		Ž	1.20.13	0820	d life at .	*It will be the responsibility of Excentiobil or its	ility of Exxonit	labil or its								
Relinquished by:	Date	Time		eceived	by Tes	Received by TestAmerica:			Date	Time	by pho	consultant to notify the TestAmerica Project Manager by phone or fax that a rush sample will be submitted	TestAmerica ush sample w	Project Ma ill be subr	mager nitied		Flow	Flow (MGD):				
											TA Proj	TA Project Manager		Date:				TRC:_				100

Mbab 7.4 ; temp. 18°C.

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Loc: 490 **19902** 

## Appendix E

# Required MLs for Samples from Outfalls O1A and 01C to Accompany Chain of Custody

Polycyclic Aromatic Hydrocarbons

Group I	Permit Required Minimum Level for Analysis, ug/L				
Benzo(a)anthracene	<0.05				
Benzo(a)pyrene	<0.05				
Benzo(b)fluoranthene	<0.05				
Benzo(k)fluoranthene	<0.05				
Chrysene	<0.5				
Dibenzo(a,h)anthracene	<0.10				
Indeno(1,2,3-cd)pyrene	<0.10				
Group II	Permit Required Minimum Level for Analysis, ug/L				
Acenaphthene	<5.00				
Acenephthylene	<5.00				
Anthracene	<2.0				
Benzo(ghi)perylene	<0.2				
Fluoranthene	<0.50				
Fluorene	<0.5				
Naphthalene	<5.00				
Phenanthrene	<2.00				
Pyrene	<1.00				
Other	Permit Required Minimum Level for Analysis, ug/L				
Available Cyanide	< 2.00				
Total Mercury (Hg)	< 2.00				
Methyl Tertiary-Butyl Ether (MTBE)	< 5,00				

## **Login Sample Receipt Checklist**

Client: Exxon Global Remed. Grp Job Number: 490-19902-1

Login Number: 19902 List Source: TestAmerica Nashville

List Number: 1

Creator: McBride, Mike

····		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

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